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| 09/916,929 | 07/26/2001 | Chris A. Barton | NAI1P014/01.128.01 | 8771 |

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Zilka-Kotab, PC
P.O. BOX 721120
SAN JOSE, CA 95172-1120

| EXAMINER | |
|---|---|
| SCHUBERT, KEVIN R | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2137 | |

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/916,929 | BARTON ET AL. | |
| | Examiner | Art Unit | |
| | Kevin Schubert | 2137 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-13,17-29 and 33-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,17-29,33-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

Claims 1-13,17-29, and 33-44 have been considered. Examiner notes that in the instant action a 112, second paragraph, rejection has been added to claims 2,18, and 34-37. Also, claims 8 and 24 are rejected based on a new ground. For these reasons, Examiner has reopened prosecution.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2,18, and 34-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, Applicant claims an action is taken upon the receipt of "favorable results". Examiner finds no definitive standard for ascertaining what constitutes "favorable results". For example, one can only speculate as to whether receiving an indication that all processed files are clean but one would constitute receiving favorable results. Further, regarding claims 34-37, Examiner finds no definitive standard for ascertaining what constitutes "unfavorable results". Appropriate correction or specific reference to where a definitive standard for these terms is present is required.

### *Claim Rejections - 35 USC § 102*

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2,4-7,8-13,17-18,20-24,25-29,33-35,38-40,42, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Grupe, U.S. Patent Application Publication No. 2002/0194212.

As per claims 1,17, and 33, the applicant describes a method of scanning data comprising the following limitations which are met by Grupe:

a) executing scanning control logic utilizing a central processing unit ([0008],[0009]);

b) identifying a request related to data at the central processing unit ([0008],[0009]);

c) indicating the data to a scanning co-processor coupled to the central processing unit so that the data is scanned by the scanning co-processor under control of the scanning control logic ([0008],[0009]);

d) waiting for results from the scanning co-processor ([0008],[0009]);

e) executing additional logic utilizing the central processing unit while waiting for the results from the scanning co-processor ([0008],[0009],[0016]);

f) initiating an event based on the results from the scanning co-processor ([0015],[0017]);

g) wherein the scanning co-processor is under the control of the central processing unit via the execution of the scanning control logic by the central processing unit ([0008],[0009]);

h) wherein it is determined whether the data meets a predetermined criteria, where the criteria is based on a type of a file associated with the data ([0012],[0036]);

i) wherein the data is sent to the scanning co-processor if it is determined that the data meets the predetermined criteria ([0012],[0036]);

j) wherein additional data to be scanned by the scanning co-processor is queued while waiting for the results from the scanning co-processor ([0009]);

As per claims 2 and 18, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Further comprising processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected ([0015]).

As per claims 4,7,20, and 23, the applicant describes the method of claims 1,6,17, and 22, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic includes hardware ([0011]).

As per claims 5 and 21, the applicant describes the method of claims 3 and 20, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic is stored on the scanning co-processor [0009].

As per claims 6 and 22, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic includes software [0011].

As per claims 8 and 24, the applicant describes the method of claims 1 and 17, which are met by Grupe, with the following limitation which is also met by Grupe:

Wherein the event is initiated under the control of the scanning control logic ([0010]-[0011]);

As per claims 9 and 25, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor performs content scanning [0011].

As per claims 10 and 26, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor performs virus scanning [0011].

As per claims 11 and 27, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning co-processor includes memory [0016].

As per claims 12 and 28, the applicant describes the method of claims 11 and 27, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein virus signatures are stored in memory ([0011],[0028]);

As per claims 13 and 29, the applicant describes the method of claims 11 and 27, which are met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein rule sets are stored in memory [0011].

As per claims 34 and 35, the claims repeat the limitations of claim 1, which is met by Grupe (see above), with the following additional limitations which are also met by Grupe:

j) initiating a security event upon the receipt of unfavorable results from the scanning co-processor including a situation where malicious code is detected ([0015],[0017]);

k) processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected ([0015]).

As per claim 38, the applicant discloses the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the criteria is further based on a user ([0036]);

As per claim 39, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the criteria is further based on software logic run by a bios ([0036]).

As per claim 40, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic is executed automatically [0009].

As per claim 42, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the scanning control logic is executed manually by a user [0028].

As per claim 44, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is also met by Grupe:

Wherein the central processing unit aids the scanning co-processor when a large amount of data is to be scanned [0016].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3,19,36,41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe in view of Zuta, International Publication No. WO 98/45778.

As per claims 3 and 19, the applicant describes the method of claims 1 and 17, which are met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the central processing unit is coupled to the scanning co-processor via a bus (Zuta: Fig 2);

Grupe discloses all the limitations of independent claims 1 and 17. However, Grupe does not disclose that the CPU is coupled to the scanning co-processor via a bus.

Zuta discloses a similar anti-virus scanning system in which a supervisor computer (2 of Fig 2) monitors the data processed by the CPU of a first computer (11 of Fig 2) and intervenes to stop the CPU of the first computer if the supervisor computer thinks a virus might be present. Zuta also discloses that the CPU of the first computer and the scanning co-processor of the supervisor computer are coupled by a bus (17 of Fig 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Zuta with those of Grupe and add the use of a bus between the CPU of the first computer and the scanning co-processor of the second computer because a bus is a commonly used method of transmitting data between two units.

As per claim 36, the applicant describes the method of claim 35, which is met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the scanning information is updated via a network periodically (Zuta: Page 12, 2nd paragraph).

As per claim 41, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the scanning control logic is executed automatically when a computer is booted up (Page 24, lines 1-3).

As per claim 43, the applicant describes the method of claim 1, which is met by Grupe (see above), with the following limitation which is met by Zuta:

Wherein the scanning control logic is executed using software logic run by a bios (Page 24, lines 1-3).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe in view of Snavely, (Snavely, Allan; Tullsen, Dean. Symbiotic Jobscheduling for a Simultaneous Multithreading Processor. Published in the Proceedings of ASPLOS IX. November 2000).

As per claim 37, the applicant describes the system of claim 35, which is met by Grupe (see above), with the following limitation which is met by Snavely:

Wherein the additional logic to be executed and the additional data queued to be scanned are handled utilizing multi-threading algorithms (Snavely: Abstract);

Grupe discloses all the limitations of independent claim 35. However, Grupe fails to mention the use of multi-threading algorithms. Snavely discloses that multi-threading algorithms are an effective way to "increase system utilization and speedup the execution of jobs" (Snavely: Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Snavely with those of Grupe and use multi-threading algorithms because multi-threading algorithms are an effective way to deal with multi-job processing such as with additional logic to be executed or additional data queued to be scanned.

***Response to Arguments***

Applicant argues the 102(e) rejection of claim 1 (et al). Applicant presents the following three arguments:

1) Grupe does not execute logic *while waiting* for the results as pertaining to part e

2) Grupe does not execute scanning control logic *by the cpu* as pertaining to part g

3) In Grupe, data to be scanned is not queued as pertaining to part j

Examiner respectfully disagrees with each argument above. Specifically regarding 1), Applicant remarks that Grupe teaches sending data to a scanning computer to be scanned and, if necessary, rescanning data identified in a log file at the source computer. From this, Applicant concludes that the source computer cannot take any action until it receives the log file from the scanning computer.

Examiner asserts that simply because a source computer sends data for scanning and re-scans data if necessary does not mean that the source computer cannot take any action until it receives data. To the contrary, Examiner refers Applicant to the statements made in the advisory action (mailed 7/6/05, see paragraph 3) which appear to have not been addressed by Applicant. Further, Examiner notes that Grupe teaches that data can be divided into different fractions and that each fraction may be sent to a different scanning computer [0016]. In this situation, Grupe teaches sending a first portion of data to a first scanning co-processor and then sending a second portion of data to a second scanning co-processor. Thus, Grupe teaches executing additional logic (e.g. sending a second portion of data) while waiting for the results from the first scanning co-processor.

Regarding 2), Applicant argues that the scanning control logic cannot be executed by the CPU since the scanning control logic is maintained on the scanning co-processor computer. Examiner respectfully disagrees with such an assertion, but notes that the argument is moot in light of the fact that nothing in the instant action indicates that the scanning control logic must be on the scanning co-processor computer.

Regarding 3), Applicant argues that it is not inherent that data to be scanned is queued. Applicant appears to offer no explanation or reasoning for such a position. Examiner repeats the position presented in the previous advisory action (mailed 7/6/05, see paragraph 5). Grupe discloses that a plurality of files, such as emails, are sent in bulk to a scanning co-processor which scans each and every file for such things as banned words [0028] and that the more files that are sent the longer the period of time to scan the files. One of ordinary skill in the art would understand that in such a situation data to be scanned is queued. If Applicant continues to present this argument, Examiner respectfully requests that Applicant specify how the Examiner is incorrect, rather than just provide an unsupported allegation.

Applicant further argues the 102(e) rejection of claims 2 and 18. Specifically, applicant appears to argue that Grupe only teaches receipt of unfavorable results since the log file indicates which files are malicious. Examiner respectfully notes that the log file allows the user to ascertain which data is malicious (needing re-scanning). The other data is clean (i.e. a situation where malicious code is not

detected). Thus, a log file clearly presents results to a source computer, and these results may indicate that a small portion of data is malicious, a large portion of data is malicious, etc. Examiner finds no definitive standard for ascertaining what constitutes *favorable or unfavorable* results.

Applicant further argues the 102(e) rejection of claims 12 and 28. Again, Examiner notes that the argument presented was addressed in the previous advisory action (mailed 7/6/05, see paragraph 7).

Applicant further argues the 102(e) rejection of claims 34 and 35. Examiner believes all arguments presented in relation to these claims have been addressed above.

Applicant further argues the 102(e) rejection of claim 38. Claim 1 requires that criteria is used to determine whether to send data for scanning. Dependent claim 38 requires that the criteria is based on a user. Grupe teaches that criteria is used to determine whether to send data for scanning and that the criteria is based on user specifications [0036]. Therefore, Grupe teaches that criteria is based on a user. Applicant appears to disagree with the above since a user is not considered content in a file. Examiner fails to see how such a statement overcomes the instant rejection.

Applicant further argues the 103(a) rejection of claims 3,19,36, and 43 over Grupe in view of Zuta. Examiner believes all arguments with respect to these claims have been addressed above.

Applicant's arguments with respect to the 103(a) rejection of claims 8 and 24 have been fully considered but are moot in view of the new ground(s) of rejection.

Applicant further argues the 103(a) rejection of claim 41. Applicant argues that Zuta does not disclose scanning control logic. Examiner respectfully disagrees but notes that the argument is moot in light of the fact that, even if true, scanning control logic is disclosed by Grupe.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally be reached on M-F 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KS

EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER